PD96-0216
Burrows
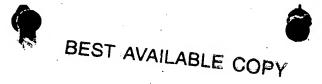
ABSTRACT OF THE DISCLOSURE

A computer implemented method performs constrained searching of an index of a database. The information of the database is stored as a plurality of records. A unique location is assigned to each indexable portion of information of the database. Index entries are written to a memory where each index entry includes a word entry representing a unique indexable portion of information, and one or more location entries for each occurrence of the unique indexable portion information. The index entries are sorted according to a collating order of the word entries, and sequentially according to the location entries of each index entry. A query is parsed to generate a first term and a second term related by an AND logical operator, the AND operator requires that a first index entry corresponding to the first term and a second index entry corresponding to the second term both have locations in the same record to satisfy a query. The location entries of the first and second index entries are searched subject to one or more constraints which must be satisfied. The constraints are expressed as $C(a) \leq C(b) + K$, where $C(a)$ means a current location

of the first index entry, $C(b)$ means a current location of the second index entry, and K is a predetermined constant.